



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,540	06/04/2007	Yoshitaka Aoyama	52029	9682

7590 01/22/2009
Roylance Abrams Berdo and Goodman
Suite 600
1300 19th Street N W
Washington, DC 20036-1649

EXAMINER

JENNISON, BRIAN W

ART UNIT	PAPER NUMBER
----------	--------------

4184

MAIL DATE	DELIVERY MODE
-----------	---------------

01/22/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/587,540	Applicant(s) AOYAMA ET AL.	
	Examiner BRIAN JENNISON	Art Unit 4184	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 July 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>7/28/2006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the target part in line 5 of Claims 11 and 15 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 5 is objected to because of the following informalities: The “[to 4]” appears to attempt to delete matter from the claim. Applicant is reminded that for deletion of 5 or fewer consecutive characters double brackets may be used. MPEP § 714.

Appropriate correction is required.

3. Claims 9 and 13 are objected to because of the following informalities: Please change "hole" in lines 3 of the claims to --hold--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 11 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claims 11 and 15 recites the limitation “the target part” in line 5 of the claims.

There is insufficient antecedent basis for this limitation in the claim.

7. Claim 15 recites the limitations “the feeding rod” in lines 3 and 5 of the claim, “the fixed electrode or the movable electrode” in lines 3-5 of the claim “the welding device” in line 4 of the claim, and “the part” in line 4 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. **Claims 1-4, 6, rejected under 35 U.S.C. 102(b) as being clearly anticipated by Aoyama et al (US 2003/0127432).**

Aoyama et al teaches:

Regarding Claim 1: A welding system characterized in that a welding device in which a movable electrode (**Fig 2 shows a welding system with movable electrode 10**) is attached to moving drive means, (**Fig 7 shows a drive means with motor 12 moving shaft 38 attached to movable electrode 10. See Paragraph [0048], Lines 2-3**) the movable electrode and a fixed electrode forming a pair, (**Fig 2 shows movable electrode 10 attached to fixed electrode 11 forming a pair of electrodes.**) and a part feeding device for feeding a part to a target position by a feeding rod moving forward and backward (**A feed apparatus 14 feeds a bolt 1 to a target position by feed rod 18 which moves forwards and backwards. See Fig 2, Paragraphs [0041] and [0042].**) are integrated through a coupling member, (**movable electrode 10 and feed apparatus 14 are integrated through coupling bracket 20. See Paragraph [0058], Lines 7-8**) so that

Art Unit: 4184

an end position of the feeding rod moved forward and an end portion of the movable electrode or the fixed electrode are in a predetermined relative positional relation.

(Fig 2 shows the end position of the feed rod 18 and movable electrode 10 being in a predetermined relative position.)

Regarding Claim 2: The welding system according to claim 1, wherein a fixing member for fixing the welding device on a stationary member is provided. **(Supporting arm 8, which is a stationary device, has the welding device with motor 12 and movable electrode 10 fixed to it. See Paragraph [0041].)**

Regarding Claim 3: The welding system according to claim 2, wherein:
the fixing member comprises a member main body and a fixed shaft member, which are integrated with each other; **(Fig 7 shows a fixing member comprising a changing mechanism 39 which constitutes a member main body and a shaft 44 which are integrated. See Paragraph [0048].)**

the member body is coupled to an end portion of the moving drive means; **(the changing mechanism 39 is coupled to motor 12. See Paragraph [0048].)**

the fixed shaft member is coupled to the stationary member to fix the welding system on the stationary member; **(The shaft 44 is coupled to a stationary member 41. See Fig 7)**

an axis line of the fixed shaft member is approximately coaxial with a moving axis line of the movable electrode; and **(The axis line of shaft 44 is coaxial with electrode 10.**

Art Unit: 4184

See Fig 7.)

a rotational position of the welding system can selectively be set by rotating the member main body with respect to the fixed shaft member. **(The changing mechanism is capable of setting a rotational position with respect to shaft 44.)**

Regarding Claim 4: The welding system according to claim 2 or 3, wherein the coupling member is integrated with the fixing member. **(Coupling bracket 20 is integrated with arm 8 by supporting strip 28. See Fig 9)**

Regarding Claim 6: The welding system according to claim 1, wherein the part is a projection bolt with a flange which is provided with a projection for welding. **(Projection bolt 1 with flange 3 is provided for welding. See Paragraph [0039] and Fig 5.)**

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aoyama et al in view of Aoyama (US 4,943,098).

The teachings of Aoyama et al have been discussed above.

Aoyama et al also teaches: **(movable electrode 10 and feed apparatus 14 are integrated through coupling bracket 20. See Paragraph [0058], Lines 7-8)**

Aoyama et al fails to teach:

Regarding Claim 5: The welding system according to claim 1, wherein a plurality of part feeding devices each of which feeds a different type of part are attached to the coupling member or an auxiliary member integrated with the coupling member.

Aoyama teaches:

Regarding Claim 5: Figs 24 and 25 show two part feeding devices which would be attached to a coupling bracket each feed rod 9 supplies part P or P'. **(See Column 8, Lines 59-65.)**

In view of the teachings of Aoyama it would have been obvious to one of ordinary skill in the art at the time of the invention to include with the teachings of Aoyama et al, the plurality of part feeding devices since Aoyama teaches the part supply rods for feeding a nut and a bolt to be welded.

12. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aoyama et al in view of Applicant's Admitted Prior Art.

Art Unit: 4184

The teachings of Aoyama et al have been discussed above.

Aoyama fails to teach:

Regarding Claim 7: The welding system according to claim 1, wherein the part is a projection nut provided with a projection for welding.

Applicant's admitted prior art teaches:

Regarding Claim 7: A projection nut is welded to a steel plate member. **(See Page 1, Lines 12-13.)**

Aoyama discloses the claimed invention except for the projection nut. It would have been obvious to one of ordinary skill in the art at the time use a projection nut instead of a projection bolt since applicant's admitted prior art shows it was known in the art to weld a projection nut or a projection bolt using the welding system.

13. Claims 8-12, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoyama et al in view of Quinci et al (US 5,396,842).

The teachings of Aoyama et al have been discussed above.

Aoyama et al also teaches:

Art Unit: 4184

Regarding Claims 8 and 12: The welding system according to claim 1, wherein a support rod which is attached to the part feeding device and extends approximately in a vertical direction penetrates a clamp block fixed on the stationary member **(A rod 16, fixed by arm 8, capable of being extended in a vertical direction penetrates bracket 17. See Fig 1. and Paragraph [0042].)** and the clamp block clamps and loosens the outer periphery of the support rod to set the vertical position of the support rod, **(The bracket 17 is capable of loosening the rod 16.)**

Regarding Claims 11 and 15: The welding system (or positioning system) according to claim 8, wherein the part feeding device is a device that feeds a part held by the feeding rod to the fixed electrode or the movable electrode of the welding device, in order to weld the part fed between the fixed electrode and the movable electrode by the feeding rod to the target part. **(Projection bolt feed apparatus 14 feeds shank 2 by part feeding rod 18. The shank is fed to fixed electrode 11 and movable electrode 10. The part is fed to be welded by electrodes 10 and 11. See Paragraph [0064])**

Aoyama et al fails to teach:

Regarding Claims 8 and 12:

and an auxiliary clamp block for setting a moving distance of the support rod in advance is disposed over or under the clamp block in such a manner that the auxiliary clamp block penetrates the support rod.

Regarding Claims 9 and 13: wherein the clamp block has a penetration hole through which the support rod with a circular cross section penetrates, a slit section continued from the penetration hold, and a fixing bolt penetrating the slit section.

Regarding Claims 10 and 14: wherein: the auxiliary clamp block has a penetration hole through which the support rod penetrates, a slit section continued from the penetration hole, and a fixing bolt penetrating the slit section; and an end face of the auxiliary clamp block can abut to an end face of the clamp block.

Quinci et al teaches:

Regarding Claims 8 and 12: Fig 8 shows a shaft 12 extending through a clamp 24 and a gripper block 26 or auxiliary clamp capable of setting a moving distance for the rod.

(See Column 3, Lines 11-15)

Regarding Claims 9 and 13: Fig 8 shows a clamp 24 with cylindrical passage 36 which rod 12 penetrates and space 42 or slit section continued from the penetration hole where screw 44 penetrates the slit section. **(See Column 3, Lines 28-46)**

Regarding Claims 10 and 14: The auxiliary clamp is merely a duplication of the clamp block which functions as an aid to the clamp block. The shaft 12 supports a plurality of

Art Unit: 4184

clamp arms 24 which would abut the end face of each other. A second clamp arm would be considered an auxiliary clamp.

In view of Quinci et al's teachings it would have been obvious to one of ordinary skill in the art at the time of the invention to include with the teachings of Aoyama et al, the clamp and auxiliary clamp since, Quinci teaches a clamp and a gripper to open or close a passage to fix the clamp to the shaft or release it.

It would also have been obvious to one having ordinary skill in the art at the time of the invention was made to include an auxiliary clamp, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Aoyama (US 5,248,058) teaches a parts feeder with a plurality of part feeding devices.

Rivers, Jr. (US 6,443,291) teaches an apparatus for providing different parts to a work piece.

Art Unit: 4184

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRIAN JENNISON whose telephone number is (571)270-5930. The examiner can normally be reached on M-Th 7:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jared Fureman can be reached on 571-272-2391. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRIAN JENNISON/
Examiner, Art Unit 4184

/ISAM ALSOMIRI/
Primary Examiner, Art Unit 3662

1/12/2009

Application/Control Number: 10/587,540
Art Unit: 4184

Page 13